

**New Jersey Department of Health and Senior Services  
Communicable Disease Service  
Vaccine Preventable Disease Program (VPDP)**

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**Pertussis (Whooping Cough) Control Guidelines**

**Infectious Agent:**

*Bordetella pertussis*

**Clinical Manifestations:**

Fever is usually mild. Children and infants are most severely affected.  
Older adolescents and adults may have milder symptoms.

There are three stages of infection:

Catarrhal: Mild upper respiratory symptoms, low-grade fever, slight cough.

Paroxysmal: Spasmodic coughing episodes (paroxysms) sometimes followed by long inspiratory whooping sound.

May also have vomiting after coughing episodes (post-tussive vomiting).

Convalescent: Although coughing episodes lessen, they may return with other respiratory infections.

**Illness Progression:**

—————→

**Stages:**

|           |            |              |
|-----------|------------|--------------|
| Catarrhal | Paroxysmal | Convalescent |
| 1-2 weeks | 1-6 weeks  | Weeks-Months |

Note: Pertussis may present with atypical symptoms in infants < 6 months old.  
Apnea may be more common than the characteristic “whoop” in this age group. Pertussis is more severe in the first year of life and in premature infants.

**Complications:**

Secondary bacterial pneumonia is the most common cause of pertussis-related deaths.  
Other complications include seizures, encephalopathy, pneumothorax, and otitis media.

**Incubation Period:**

5-21 days (average 7-10 days) following exposure

**Transmission:**

Reservoir: Adolescents and adults are often the sources of pertussis in children.

Modes of transmission: Transmission most commonly occurs by the respiratory route through direct contact with airborne droplets of respiratory secretions from infectious individuals. Transmission through contact with contaminated environmental surfaces (e.g., fomites) occurs rarely, if at all.

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**Period of Communicability:**

From onset of symptoms to 3 weeks after onset of cough. Treatment with appropriate antibiotics will shorten this period.

**Basic Epidemiology:**

- No seasonal pattern.
- Attack rate is 70% to 100% in unimmunized household contacts.
- Children <5 years represent approximately 22% of nationally reported cases.
- Children 10-19 years represent 38% of nationally reported cases

**Testing and Diagnosis:**

There are two types of diagnostic tests recommended by CDC for confirming pertussis:

1. **Bacterial Culture (preferred method):**

- Available at NJDHSS Public Health and Environmental Laboratories (PHEL) and other diagnostic laboratories.
- Use a flexible nasopharyngeal swab. DO NOT use cotton swabs as they may inhibit growth of *B. pertussis*.
- Nasopharyngeal swabs have thin wire shafts and are flexible. You cannot collect a specimen with a throat swab. Throat swabs are not acceptable specimens.
- All specimens should be nasopharyngeal specimens, NOT pharyngeal (throat).
- Special culture media needed, prior antibiotic therapy may interfere with growth.
- Specimens obtained for culture within 2 weeks of cough onset have a higher proportion of culture-positive results.
- Testing of asymptomatic contacts is NOT necessary.

2. **Polymerase chain reaction (PCR) should be used in conjunction with and not in place of culture:**

- Performed at several laboratories. PCR will be available by October 2005 at PHEL.
- Use a flexible nasopharyngeal swabs. DO NOT use cotton swabs as they may inhibit growth of *B. pertussis*.
- Nasopharyngeal swabs have thin wire shafts and are flexible. You cannot collect a specimen with a throat swab. Throat swabs are not acceptable specimens.
- All specimens should be nasopharyngeal specimens, NOT pharyngeal (throat).
- Testing of asymptomatic contacts is NOT necessary.

**NOTE:** Direct fluorescent antibody testing (DFA) and serology might be used in clinical settings to diagnose pertussis. However, DFA and serology **CANNOT** be used for case confirmation for the purposes of statewide and national reporting. The reason behind this policy is based on the following: 1) DFA is characterized by low sensitivity and variable specificity and 2) the CDC and NJDHSS do not consider serologic results interpretable. Therefore, for the purposes of confirming cases, the use of serology and DFA should be discouraged.

The interpretability of each test depends on the age of the patient and the stage of the disease during which the specimen is collected. Culture and PCR are most sensitive in the catarrhal stage and when cough has been present  $\leq 2$  weeks, but after that time false negative results can occur.

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However, PCR may be able to identify the organism for up to 3-4 weeks or longer after cough onset.

Local health departments may obtain specimen collection kits provided by the PHEL from their representative LINCS agency or by calling the VPDP at (609) 588-7512 if a supply problem exists. There is no charge for the collection kits or for laboratory tests performed.

**Definitions:**

Date Calculations:

First Day of Communicability: Date of symptom onset.

Last Day of Communicability: Date of cough onset + 21 days, or 5 days after initiation of appropriate antibiotic therapy.

Period of Communicability: 1<sup>st</sup> day of communicability through last day of communicability.

Clinical Case Definitions:

Clinical case definition for use in **non-outbreak** settings:

A cough illness lasting  $\geq 14$  days with one of the following: paroxysms of coughing, inspiratory “whoop,” or post-tussive vomiting, and without other apparent cause (as reported by a health professional).

Clinical case definition for use in **outbreak** settings:

A cough illness lasting  $\geq 14$  days.

Types of Outbreak Settings:

Household:

- Two or more cases in a household.
- A household consists of all persons who occupy a particular housing unit as their usual residence, or who live there during the time of the case-patient's illness.
- The outbreak case definition may be used to count cases if one case has been confirmed (by culture, PCR, or epidemiologic linkage).

Institutional outbreak setting (e.g., schools, day care centers, health care settings):

- Two or more cases clustered in time (e.g., cases occurring within 42 days of each other) and space (e.g., in one building) where transmission is suspected to have occurred in that setting (e.g., nosocomial transmission in a hospital)
- The outbreak case definition may be used to count cases if one case has been confirmed (by culture, PCR, or epidemiologic linkage).

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Case Classification:

Possible: An illness consistent with pertussis and without other apparent cause such as:

- Cough of  $\geq 7$  days, or
- Paroxysmal cough of any duration, or
- Cough with inspiratory whoop, or
- Cough associated with apnea in an infant, or
- Cough in a close contact (of someone with pertussis).

Note: Possible cases should be reported to the appropriate local health department official for follow-up (e.g., to ensure nasopharyngeal swab or aspirate is taken for PCR/culture, and for patient treatment and prophylaxis of contacts, if indicated).

Probable:

Meets the clinical case definition but is not laboratory-confirmed and is not epidemiologically linked to a laboratory-confirmed case.

Confirmed:

- An acute cough illness of any duration associated with *B. pertussis* culture isolation, or
- A case that meets the clinical case definition and is confirmed by PCR, or
- A case that meets the clinical case definition and is epidemiologically linked directly to a case confirmed by either culture or PCR.

Close contact is characterized by:

- Direct face-to-face contact with a case-patient regardless of the number of hours spent together (e.g., close friends, playmates, household members, girlfriend, boyfriend, teammates, healthcare provider, patients);
- Shared confined space in close proximity for a prolonged period of time with a symptomatic case-patient (e.g., a classroom setting); or
- Direct contact with respiratory, oral, or nasal secretions from a symptomatic case-patient (e.g., an explosive cough or sneeze in the face; kissing; sharing food or eating utensils during a meal; sharing lip gloss, cigarettes, or drugs; mouth-to-mouth resuscitation; or performing a full medical exam including examination of the nose and throat).

High-risk contacts include:

- Persons who are contacts of a pertussis case-patient, who are at risk for developing severe disease and adverse outcomes:
  - \* Infants aged  $<1$  year,
  - \* Persons who have an immune deficiency condition, or
  - \* Persons who have other underlying severe disease or conditions such as chronic lung disease, cystic fibrosis, COPD, cancer, asthma.

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- Persons who are contacts of a pertussis case-patient and may expose persons at high-risk for severe disease:
  - \* Health care workers providing direct patient care. Examples include nurses who work with neonatal or pediatric patients, with labor and delivery, or with post-partum women; pediatricians; and obstetricians.
  - \* Other health care workers (e.g., administrative staff, nursing or medical students, emergency medical personnel, laboratory technicians, hospital volunteers, dieticians, janitors).
  - \* A midwife.
  - \* A labor coach.
  - \* A babysitter (of infants).
  - \* A woman who is pregnant (because she may expose other pregnant women and health care workers, and because she will be a mother of an infant).
  - \* Other household members or contacts who have pertussis and may expose an infant.

**Investigation:**

Case Investigation - Complete Pertussis Case Investigation Form IMM-24, which may be downloaded from <http://nj.gov/health/cd/manual/forms.shtml> :

- Demographics: DOB, gender, occupation, date reported, associated w/ outbreak, etc.
- Track all close contacts.
- Transmission setting: employment, school, contacts.
- Clinical symptoms: date of onset of cough, whoop, paroxysms, and post-tussive vomiting. Include factors that predispose to disease or severity of illness, e.g., prematurity, immunosuppression.
- Complications: pneumonia, seizures, encephalopathy, hospitalization, death.
- Lab results: include lab name, type of tests, and date specimen taken.
- Treatment: antibiotics including the start date, duration of treatment.
- Known or possible sources of exposure of the case.
- Vaccine history: type, number of doses, vaccination dates; also manufacturer and lot number if available.

Outbreak Investigation - Complete Pertussis Case Investigation Form IMM-24 for each case and create line listing if a total of 3 or more possible, probable, or confirmed cases:

- Demographics: DOB, gender, occupation, date reported, associated w/ outbreak, etc.
- Track all close contacts.
- Transmission setting: employment, school, contacts.
- Clinical symptoms: date of onset of cough, whoop, paroxysms, and post-tussive vomiting. Include factors that predispose to disease or severity of illness e.g., prematurity, immunosuppression.
- Complications: pneumonia, seizures, encephalopathy, hospitalization, death.
- Lab results: include lab name, type of tests, and date specimen taken.
- Treatment: antibiotics including the start date, duration of treatment.
- Known or possible sources of exposure of the case.
- Vaccine history: type, number of doses, vaccination dates; also manufacturer and lot number if available.

Note: If contacts of a confirmed or probable case are symptomatic:

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- Obtain appropriate diagnostic specimens prior to treatment or prophylaxis, if this will not compromise medical care.
- Refer for medical evaluation, begin treatment / prophylaxis as appropriate for patient.
- Follow-up daily on culture/ diagnostic test results.
- Begin case investigation.

**Control Measures:**

**A. Antibiotics for Treatment and Chemoprophylaxis**

The *earlier* antibiotics are started, the *more* effective they are in preventing disease transmission from the case-patient to contacts, as well as from contacts to others. Those with close contact to a confirmed case must take the antibiotics for the prescribed number of days; if they do *not*, they must *repeat* the entire antibiotic course from the beginning.

The recommendations for treatment of cases and prophylaxis of contacts to cases are identical. The symptoms of pertussis may be modified if treatment is begun early, during the catarrhal stage. If begun later in the course of illness, treatment will decrease the infectious period but may not decrease the duration of cough or severity of disease.

The American Academy of Pediatrics (AAP) states that the macrolides clarithromycin and azithromycin can be alternatives for patients who cannot tolerate erythromycin. In addition, doxycycline is sometimes used if a patient is unable to tolerate the usual antibiotics, and some studies have shown it to be effective. However, doxycycline should be avoided in pregnant women and in children <8 years old.

The current recommendations for prophylaxis and treatment of pertussis are summarized in the table below from the 2005 CDC Guidelines regarding recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis.

**TABLE 4. Recommended antimicrobial treatment and postexposure prophylaxis for pertussis, by age group**

| Age group                             | Primary agents  |  |   | Alternate agent*   |
|---------------------------------------|---|--|---|--|
|                                       | Azithromycin  | Erythromycin   | Clarithromycin  | TMP-SMZ  |
| <1 month                              | Recommended agent. 10 mg/kg per day in a single dose for 5 days (only limited safety data available.) | Not preferred. Erythromycin is associated with infantile hypertrophic pyloric stenosis. Use if azithromycin is unavailable; 40–50 mg/kg per day in 4 divided doses for 14 days | Not recommended (safety data unavailable)                             | Contraindicated for infants aged <2 months (risk for kernicterus)  |
| 1–5 months                            | 10 mg/kg per day in a single dose for 5 days  | 40–50 mg/kg per day in 4 divided doses for 14 days   | 15 mg/kg per day in 2 divided doses for 7 days                        | Contraindicated at age <2 months. For infants aged ≥2 months, TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days |
| Infants (aged ≥6 months) and children | 10 mg/kg in a single dose on day 1 then 5 mg/kg per day (maximum: 500 mg) on days 2–5                 | 40–50 mg/kg per day (maximum: 2 g per day) in 4 divided doses for 14 days  | 15 mg/kg per day in 2 divided doses (maximum: 1 g per day) for 7 days | TMP 8 mg/kg per day, SMZ 40 mg/kg per day in 2 divided doses for 14 days   |
| Adults                                | 500 mg in a single dose on day 1 then 250 mg per day on days 2–5                                      | 2 g per day in 4 divided doses for 14 days   | 1 g per day in 2 divided doses for 7 days                             | TMP 320 mg per day, SMZ 1,600 mg per day in 2 divided doses for 14 days  |

\* Trimethoprim sulfamethoxazole (TMP–SMZ) can be used as an alternative agent to macrolides in patients aged ≥2 months who are allergic to macrolides, who cannot tolerate macrolides, or who are infected with a rare macrolide-resistant strain of *Bordetella pertussis*.

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### **Precautions When Treating or Prophylaxing Newborns**

An association between orally administered erythromycin and infantile hypertrophic pyloric stenosis (IHPS) has been reported in infants <6 weeks of age. Since confirmation of erythromycin as a contributor to cases of IHPS will require additional investigation, and since alternative therapies are not as well studied, erythromycin is still recommended for the prophylaxis and treatment of disease caused by *B. pertussis*. NJDHSS recommends the following when administering erythromycin to young infants:

- Groups/individuals exposed to pertussis should be determined with precision in order to minimize unnecessary prophylaxis in infants.
- Physicians who prescribe erythromycin to newborn infants should inform parents about the potential risks of developing IHPS and signs of IHPS, such as projectile vomiting or excessive irritability.
- Cases of IHPS following use of oral erythromycin should be reported to MedWatch at 800-FDA-1088 (tel.) or 800-FDA-0178 (fax).

Note:

- Persons with pertussis are considered non-infectious after having completed 5 days of any of the appropriate antibiotics or if it has been at least 21 days since their onset of cough.
- Antibiotics given during the catarrhal stage may lessen the severity of the disease and decrease communicability; however, treatment after the third week of cough is of questionable benefit.

B. Exclusion:

- Exclude cases and symptomatic contacts of **confirmed or clinically compatible** cases from school and sensitive work settings (daycare, healthcare) if <21 days from cough onset and duration of antibiotics is <5 days.
- **As a general rule, ASYMPTOMATIC contacts do NOT have to be excluded from most settings. However, in certain high-risk settings (e.g., daycare or healthcare), NJDHSS may recommend exclusion of asymptomatic contacts not receiving antibiotic prophylaxis and/or may extend the exclusion period beyond 21 days up to a maximum of 42 days.**
- Under-immunized and un-immunized children attending daycare should be excluded immediately for 21 days after their last exposure. DTaP is the preferred vaccine for children under 7 years of age. Tdap is available and recommended for children 11-18 years old; however, at the current time, guidelines for its use as an outbreak control intervention have not been developed. Tdap is also licensed by the FDA for use in persons 10-64 years of age.

C. Prophylaxis:

- Asymptomatic household and close contacts of a confirmed or probable case whose last exposure was > 21 days from the onset of cough of the case generally do not need prophylaxis:
  - Contacts who are at high risk of severe disease (e.g., infants, immunocompromised persons); however, may benefit from prophylaxis even if exposure occurred up to 42 days from the case-patient's onset of cough.

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- ◆ Asymptomatic household and close contacts of a confirmed or probable case whose last exposure was  $\leq 21$  days:
  - Should receive appropriate chemoprophylaxis irrespective of their immunization status;
  - Should be observed for respiratory symptoms for 21 days after last exposure; and
  - Should have their immunization status reviewed – if under 7 years of age and have an incomplete immunization series, they should receive the required doses at the recommended minimal intervals to bring them up to date for their age (vaccine may be given to infants as early as 6 weeks of age). Tdap was licensed in June 2005 for persons ages 10-64, and may be given to individuals as a 10-year booster dose.

**Reporting:**

- Complete Pertussis Case Investigation Form IMM-24 on possible, probable and confirmed cases, which may be downloaded from <http://nj.gov/health/cd/manual/forms.shtml>.
- Cases of pertussis (both suspect and known) are reportable\* immediately to the patient's local health department.
- Local health departments are required to report confirmed and probable (suspect) pertussis cases to the NJDHSS Vaccine Preventable Disease Program using the phone, CDRS, or fax within 24 hours of receiving report.
- Update/close-out cases in the CDRS/CDRSS and send completed IMM-24 to the NJDHSS, Vaccine Preventable Disease Program, P.O. Box 369, Trenton, NJ 08625-0369.

\* Persons required to report diseases are: physicians; advance practice nurses; physicians' assistants; and persons having control or supervision over a health care facility, correctional facility, school, summer camp, child care center, preschool, or institution of higher education.



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**BORDETELLA PERTUSSIS-LABORATORY TESTING**

Standard testing of suspected cases of *Bordetella pertussis* infection within the Department's PHLS includes culture and polymerase chain reaction (PCR). Direct Fluorescent Antibody (DFA) and serological testing are not recommended for disease confirmation because DFA displays low sensitivity, while serology testing is not standardized and unsuitable for diagnostic purposes.

**Specimen Collection**

- Determine if patient is currently or has recently been on antimicrobial therapy.
- Label the Regan-Lowe Transport (RLT) media in the *B. pertussis* DHSS-provided collection kit with the patient's name or unique identifier. The specimen **must** be labeled or it will be rejected for testing by the PHLS Unit. A completed BACT 109 laboratory form, available on the DHSS website (<http://nj.gov/health/>) under *Forms*, must accompany each specimen submitted for testing. Please check to ensure the transport media being used has not expired. **SPECIMENS SUBMITTED ON OUTDATED MEDIA WILL NOT BE TESTED.**
- Immobilize the patient's head, and using the Dacron nasopharyngeal (NP) swab provided, gently pass the swab through the nostril into the nasopharynx. Hold the swab near the septum and floor of the nose and rotate. This technique should initiate a cough. Leave the NP swab in place for a few seconds to a minute before withdrawal. **DO NOT USE COTTON SWABS. THEY WILL NOT BE TESTED. When possible, 2 NP swabs should be collected.**
- Once removed, gently insert the NP swab into the room temperature semisolid RLT media and snip off the excess swab shaft with a scissor and recap the transport tube **tightly**.
- If immediate transport is not possible, leave the specimen in the transport tube at room temperature so it is suitable for both culturing and PCR testing.

**Specimen Transport**

- To enhance culture recovery of *B. pertussis*, the sample should be transported cold (2-8 degrees C or 36-46 degrees F) to the laboratory within 24 hours using a commercial overnight delivery service. It is essential that transport media be cold upon receipt at the laboratory to eliminate the possibility of false results. If using a DHSS-provided kit, a Freeze Pak is included and should be placed frozen in the Styrofoam mailer along with the specimen and paperwork for transport. **Sample submissions can routinely be made Monday through Thursday.**
- When convenient to the submitter, the Department's established courier service pick-up sites may also be considered for delivery of the sample to the laboratory. However, the Department laboratory will NOT pay for a commercial carrier or mailing of specimens for testing. If shipping specimens overnight, they must be packaged as diagnostic specimens in compliance with guidance located at: <http://www.cdc.gov/od/ohs/pdffiles/DOTHazMat8-14-02.pdf> and <http://www.iata.org/>
- Prolonged delay in transport to the laboratory (more than 48 hours) and inappropriate or outdated transport media is cause for sample rejection and testing will NOT be performed.

**DHSS SAMPLE COLLECTION KIT CONTENTS**

SHIPPING CONTAINER  
SPECIMEN SUBMISSION FORM  
SHIPPING LABEL  
2 NASOPHARYNGEAL DACRON SWABS  
2 REGAN-LOWE TRANSPORT MEDIUM TUBES  
INNER SHIPPING CONTAINER  
FREEZE PAK

REMOVE FREEZE PAK FROM DHSS KIT AND STORE FLAT IN FREEZER UNTIL READY TO TRANSPORT.

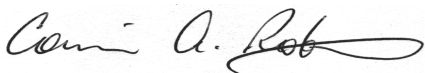
**PLEASE NOTE: WHEN USING COMMERCIAL CARRIER OR USPS SHIPPER IS RESPONSIBLE FOR ASSURING PACKAGE IS IN COMPLIANCE WITH ALL CURRENT SHIPPING AND LABELING REGULATIONS.**


FOR ADDITIONAL INFORMATION, CONTACT THE SPECIAL BACTERIOLOGY UNIT AT  
**609-984-2514**

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Approved on 12 / 2 / 05

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By   
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**References:**

Red Book 2004: Report of the Committee on Infectious Diseases, 26<sup>th</sup> Edition. Illinois, Academy of Pediatrics

Manual for the Surveillance of Vaccine-Preventable Diseases, CDC, 2002 (on line)

Vaccines (Third Edition), Stanley A. Plotkin, M.D., Walter A. Orenstein, M.D.

Epidemiology and Prevention of Vaccine Preventable Diseases (Pink Book), Eighth Edition, January 2004

New York State Department of Health Immunization Program – Surveillance Guidelines and Pertussis Protocol

Guidelines for the Control of Pertussis Outbreaks, CDC, 2000 (on line)

Centers for Disease Control and Prevention website at [www.cdc.gov/nip/publications](http://www.cdc.gov/nip/publications) (see pertussis)

Loeffelholz M.J, Thompson C.J, Long K.S, Gilchrist R. 1999. Comparison of PRC, Culture, and Direct Fluorescent Antibody Testing for Detection of *Bordetella pertussis*. Journal of Clinical Microbiology 37(9): 2872-2876.

Cloud C. L, Hymas W, Carroll K.C. 2002. Impact of Nasopharyngeal Swab Types on Detection of *Bordetella pertussis* by PCR and Culture. Journal of Clinical Microbiology. 40(10):3838-3840.

Centers for Disease Control and Prevention. Recommended antimicrobial agents for the treatment and postexposure prophylaxis of pertussis: 2005 CDC guidelines. MMWR 2005;54(No. RR-14):[inclusive page numbers].

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**Pertussis Fact Sheet  
(Whooping cough)**

**What is pertussis?**

Pertussis, or whooping cough, is a highly contagious disease involving the respiratory tract. It is caused by a bacterium that is found in the mouth, nose and throat of an infected person. Approximately 200 cases are now being reported annually in New Jersey. In 1999, there were only 30 cases compared to 223 cases in 2004, representing an increase of 643 percent over that period. The reasons for this increase are likely to be multifactorial and include improvements in diagnosis and reporting of cases.

**Who gets pertussis?**

Pertussis can occur at any age. Although most of the reported cases occur in children under five years, the number of cases among adolescents and adults is increasing. Pertussis most often affects persons without any pertussis vaccination, those persons with incomplete vaccinations, and those adolescents or older persons who were previously vaccinated as children.

**How is pertussis spread?**

Pertussis is primarily spread through the air by close contact or by direct contact with discharges from the nose and throat of infected individuals. Older siblings who have the bacteria in their nose and throat can be a source of disease in the home and infect an infant in the household.

**What are the symptoms of pertussis?**

Pertussis begins as a mild upper respiratory infection. Initially, symptoms resemble those of a common cold, including sneezing, runny nose, low-grade fever and mild cough. Within two weeks, the cough becomes more severe and is characterized by episodes of numerous rapid coughs (called paroxysms) followed by a crowing or high-pitched whoop. These episodes may recur for one to two months, and are more frequent at night. Older people or partially immunized children can have milder or less specific symptoms.

**How soon after infection do symptoms appear?**

The incubation period is usually 7 to 10 days after being exposed to an infected person but may be as long as 21 days.

**When and for how long is a person able to spread pertussis?**

A person can transmit pertussis from onset of symptoms to three weeks after the onset of coughing episodes. Pertussis is most infectious to others during the earliest stages of illness. The period of communicability can be reduced to five days after antibiotic therapy is begun.

**How is pertussis diagnosed?**

Pertussis can be very difficult for a doctor to diagnose. A doctor or parent may think a child has pertussis because of the symptoms, but specific lab tests are the only way to be sure. To test for pertussis the nasal passages are swabbed, and nasal material on the swab is then examined in a laboratory for the presence of pertussis bacteria.

**Does past infection with pertussis make a person immune?**

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One attack of pertussis usually provides immunity for a long time, but second attacks occasionally occur.

**What are the complications associated with pertussis?**

Complications of pertussis may include pneumonia, middle ear infection, loss of appetite, dehydration, seizures, brain damage, brief periods of absence of breathing and death.

**How and when is the vaccine for pertussis given?**

The vaccine for pertussis is usually given in combination with diphtheria and tetanus. Immunization authorities recommend that DTaP (diphtheria, tetanus, acellular pertussis) vaccine be given at two, four, six and 15-18 months of age and between four and six years of age. An adolescent/adult Tdap booster dose was licensed for individuals ages 10-64 in 2005 and may soon be recommended for certain persons in the future.

**What can be done to prevent the spread of pertussis?**

The single most effective control measure is immunizing as many individuals as possible against pertussis. Treatment of cases with certain antibiotics can shorten the contagious period. People who have or may have pertussis should stay away from children and infants until properly treated. Giving antibiotics to people who are close contacts of pertussis cases is also an important part of prevention.

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Send questions or comments to: [njhealth@doh.state.nj.us](mailto:njhealth@doh.state.nj.us)  
Revised: April 2005- What's This Month/Help

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**Sample Letter**

Dear Parent/Guardian:

We have had *[#of]* cases of *[confirmed, suspected]* pertussis (whooping cough) identified in our school. Pertussis is a highly contagious disease that is spread through the air by a cough or a sneeze. Pertussis begins with cold symptoms and a cough, which become much worse over 1-2 weeks. Symptoms usually include a long series of coughing fits followed by a whooping noise. However, older children, adults and very young infants may not develop the whoop. There is generally only a slight fever. People with pertussis may have a series of severe coughing fits followed immediately by vomiting, turning blue, or difficulty catching breath. The cough is often worse at night, and cough medicines usually do not help alleviate the cough.

If your child has been around someone with pertussis, s/he might become sick with the disease. This is especially true if your child is not up-to-date with his/her pertussis vaccine shots. Even if your child's shots are up-to-date, s/he might still get pertussis.

If your child has been in contact with someone with pertussis, antibiotics prescribed by your doctor may prevent him/her from becoming ill. If your child is already sick, giving antibiotics early can help your child get well faster and lower the chances of spreading the disease to others.

Please consider the following New Jersey Department of Health and Senior Services recommendations:

1. Infants under one year old, especially those under six months, are most likely to have severe symptoms if they develop pertussis. When possible, young infants should be kept away from people with a cough. **Infants with any coughing illness should be seen promptly by their doctor.**
2. Pertussis vaccine has until recently, been given only to children under 7 years old. However, a new adolescent and adult pertussis booster vaccine is now available for person's ages 10 – 64 years. If you have children who have not been completely immunized against pertussis (particularly infants under one year) we recommend you now talk to your child's doctor about the benefits of vaccination.
3. If your child comes down with cold symptoms that include a cough, talk to your child's doctor immediately. Tell the doctor that pertussis has been identified at your child's school.
4. It is generally recommended that those persons having close contact with a pertussis case receive antibiotics from their doctor to help prevent them from getting pertussis.
5. Do not send your child to school if s/he has any signs or symptoms of pertussis.

We continue to monitor the situation at school and if additional actions to control the spread of pertussis among pupils become necessary, we will again notify parents.

If you have general concerns or questions about pertussis, contact your local health department at *[phone#]*. If you have specific concerns or questions about your child's health, contact your health care provider.

**New Jersey Department of Health and Senior Services**  
**Communicable Disease Service**  
**Vaccine Preventable Disease Program (VPDP)**

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Signed:  
School principal/nurse/Dr.

Enc: "optional" -> Copy of Pertussis Facts Sheet  
Sample Community Press Release

We have recently had (# of) cases of (*confirmed, suspected, clinically diagnosed*) pertussis reported in (*community*) since (*month/year*). The ages of these cases range from (*age to age*). Pertussis, also known as whooping cough, is a serious bacterial infection of the respiratory tract. Pertussis is a contagious disease that is usually spread through the air with close indoor repeated contact to an infected person by talking, coughing, or sneezing.

The illness starts with cold symptoms and a cough that gets progressively worse over 1-2 weeks and may last for months. Symptoms usually include a long series of coughing fits that may be followed by whooping noises, vomiting, turning blue, or difficulty catching one's breath. Older children, adults, and very young infants may not exhibit the characteristic whoop sound. The coughing often intensifies at night, and cough medicines usually will not alleviate the cough. Generally, the symptoms and complications of pertussis are less apparent among older children and adults.

Serious complications such as pneumonia and other problems can result among all age groups due to pertussis infection. Although deaths related to pertussis are rare, they do occur, especially among young infants who have not yet started or completed the pertussis vaccinations. Up to approximately 30% of persons with pertussis require hospitalization, and about 70% of these are infants under 6 months of age.

Pertussis can infect anyone. Making sure that all children under age 7 receive all their pertussis vaccinations on time remains the best way to control the spread of disease to the most at-risk population. Children should receive four doses of the DTaP vaccine between 2 – 18 months of age and an additional dose before starting school. The recent increase in the number of reported cases is occurring primarily in the (*age to age*) group. While the DTaP vaccine is routinely given to all infants and young children up to age 7, the protection from the vaccine wears off over time and has resulted in more previously vaccinated pre-adolescent and adolescent children acquiring pertussis. A recently licensed Tdap pertussis booster vaccine for persons 10-64 years of age may help to provide added protection against pertussis for adolescents and adults.

Persons diagnosed with pertussis must take the full course of antibiotics prescribed by their physician and remain isolated until they have completed five days of treatment in order to limit potential spread of pertussis. Close contacts of pertussis cases should also be taking antibiotics to prevent them from getting pertussis.

If you think you or a family member may have pertussis or been in contact with a pertussis case, consult your health care provider or doctor. Persons with a cough of seven days or longer with explosive coughing spasms or sleep-disturbing coughing should contact their physician regarding possible laboratory testing and treatment.

If you have any questions or further concerns on pertussis you have contact your doctor or (local health department) at (xxx-xxx-xxxx).

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For additional information about pertussis visit: [www.cdc.gov/nip/diseases/pertussis](http://www.cdc.gov/nip/diseases/pertussis).

Sample Physician Cooperation Request Letter

Local Health Department Letterhead

[Date]

[Addressee Name/Address]

Dear [Doctor's Name]:

I am contacting you in regard to your patient [name]. The [local health department name] has recently received notice of a [positive laboratory result] for [disease] on this patient which requires follow-up. As you may be aware, [disease] is an [immediately] reportable illness in New Jersey. This allows the local health department to contact the patient to provide education, to collect information for an official case investigation/report form and to implement any necessary control measures.

New Jersey Public Law at N.J.S.A. 24:4.1 et. seq. gives the New Jersey Department of Health and Senior Services (NJDHSS) authority to define what diseases shall be regarded as dangerous to the public health and to require the reporting of such suspected or confirmed diseases. Under this authority the NJDHSS has established regulations making certain diseases reportable to local health departments at N.J.A.C. 8:57-1 Reportable Communicable Diseases. These regulations outline the reporting requirements for physicians, hospitals, and laboratories that apply to cases of such diseases. The local health department is required to collect information for the NJDHSS and implement any necessary control measures. The New Jersey Communicable Disease Reporting Regulations can be accessed online at <http://nj.gov/health/cd/njac857.pdf>.

The federal HIPAA Privacy Rule at (45 CFR § 164.512(a)) or 2) also permits disclosures, not requiring prior permission from a patient, to a public health authority as required by state law to report disease cases or collect information about the person(s) affected by a disease investigation and for public health purposes (45 CFR § 164.512(b)(i)).

I would like to speak to you regarding the [laboratory results], and clinical or other information that the patient may not be able to provide. [I have left several phone messages for you and have not been able to speak to you or your staff representative directly.] Please contact me at your earliest convenience so that I may obtain the information required for this investigation. All the information that I obtain from either you or your patient is confidential.

I can be contacted at [telephone #] on [relevant dates/times]. I look forward to discussing this matter with you and will be happy to answer any questions that you may have regarding this investigation.

Sincerely,

**New Jersey Department of Health and Senior Services  
Communicable Disease Service  
Vaccine Preventable Disease Program (VPDP)**

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[Name, Title]

cc:]